Claims:

1. A method, comprising:

reducing the power level of an optical signal propagating in an optical transmission line in response to the absence of a counter-propagating supervisory signal.

2. The method of claim 1, further comprising the step of reducing counter-propagating optical power in response to the absence of the optical signal.

3. The method of claim 2, wherein the step of reducing the power level of the optical signal and the step of reducing counter-propagating optical power are performed substantially at the same time.

4. The method of claim 2, wherein the step of reducing the power level of the optical signal comprises at least one of:

reducing pump power supplied by at least one pump source coupled to the optical transmission line; and

reducing gain supplied by at least one optical amplifier coupled to the optical transmission line.

5. The method of claim 4, wherein the step of reducing the counter-propagating optical power comprises reducing counter-propagating pump power supplied by at least one pump source coupled to the optical transmission line.

6. The method of claim 1, wherein the power level of the optical signal is reduced by a predetermined amount such that harm from an optical signal emanating from a fault in the optical transmission line is substantially reduced.

7. The method of claim 2, wherein the counter-propagating optical power is reduced by a predetermined amount such that harm from an optical signal emanating from a fault in the optical transmission line is substantially reduced.

8. The method of claim 1, further comprising the step of restoring the power level of the optical signal in response to the presence of the counter-propagating supervisory signal.

9. The method of claim 2, further comprising the step of restoring the counter-propagating optical power in response to a notification of the presence of the counter-propagating supervisory signal.

10. A method, comprising:

a) detecting loss of a supervisory signal counter-propagating in an optical fiber path at a first network element; and

b) responsive to the loss of the supervisory signal, reducing the power level of an optical signal output from the first network element by a predetermined amount.

11. The method of claim 10, further comprising:

c) detecting loss of the optical signal propagating in the optical fiber path at a second network element; and

d) responsive to the loss of the optical signal, reducing counter-propagating optical power output from the second network element by a predetermined amount.

12. The method of claim 11, wherein the steps b) and d) are performed substantially at the same time.

13. The method of claim 10, wherein step b) comprises at least one of:

reducing pump power supplied by at least one pump source coupled to the optical fiber path in the first network element; and

reducing gain of at least one optical amplifier coupled to the optical fiber path in the first network element.

14. The method of claim 11, wherein step d) comprises reducing counter-propagating pump power supplied by at least one pump source coupled to the optical fiber path in the second network element.

15. The method of claim 11, further comprising:

e) responsive to the loss of the optical data signal, reducing counter-propagating optical signal power output from at least one additional network element by a predetermined amount.

16. A network element adapted for use in an optical transmission system, comprising:

at least one gain element, for providing an optical signal to an optical transmission line; and

a controller, for reducing the power level of an optical signal generated by the at least one gain element in response to the absence of a counter-propagating supervisory signal.

17. The network element of claim 16, wherein the controller, in response to the absence of the counter-propagating supervisory signal, provides an indication to a downstream network element that the supervisory signal is absent.

18. The network element of claim 16, wherein the network element comprises a repeater.

19. The network element of claim 18, wherein the at least one gain element comprises at least one of an optical amplifier and a pump source.

20. In a lightwave communication system having a plurality of network elements for supplying an optical signal adapted for transmission in an optical fiber path, an apparatus for controlling power of an optical signal propagating in the optical fiber path comprising:

means for detecting loss of a supervisory signal counter-propagating in the optical fiber path; and

a first automatic power reduction circuit for reducing the power level of an optical signal output from a first network element by a predetermined amount in response to the loss of the supervisory signal.

21. The apparatus of claim 20, further comprising:

means for detecting loss of the optical signal propagating in the optical fiber path; and

a second automatic power reduction circuit for reducing counter-propagating optical power output from a second network element by a predetermined amount in response to the loss of the optical signal.